

WHAT IS CLAIMED IS:

1. A compression gauge assembly for diagnosing pressure variances of an engine cylinder(s), the assembly comprising:

a) a gauge sensor in communication with the engine cylinder(s), the gauge sensor being operative to detect compression stroke pressures within the cylinder(s);

b) a gauge controller in communication with the gauge sensor, the gauge controller including a comparator circuit operative to compare detected compression stroke pressures within the cylinder(s) and to derive the pressure variances therebetween; and

c) a gauge display in communication with the gauge controller for displaying the derived pressure variances.

2. The assembly of Claim 1 wherein the gauge controller comprises a detected pressure storage circuit for storing at least five compression stroke pressures.

3. The assembly of Claim 1 wherein the comparator circuit is operative to compare first and last compression stroke pressures detected in a cylinder, and for deriving the pressure variances therebetween.

4. The assembly of Claim 3 wherein the gauge display is operative to generate a comparison of the first and last compression stroke pressures.

5. The assembly of Claim 4 wherein the gauge display represents the compression stroke pressures as bar graphs.

6. The assembly of Claim 1 further comprising a cylinder connector for communicating the compression stroke pressures from cylinders recessed in the engine, the cylinder connector having a first connector end in communication with the gauge assembly and a second connector end extendable to engage the recessed cylinders.

7. The assembly of Claim 6 wherein the cylinder connector includes a substantially rigid tube.

8. The assembly of Claim 1 wherein the gauge sensor comprises a plurality of sensors each in communication with the gauge controller and a dedicated cylinder.

9. The assembly of Claim 1 wherein the gauge sensor comprises a sensor alternately connectable to a plurality of cylinders.

10. The assembly of Claim 1 wherein the gauge controller comprises a detected pressure storage circuit operative to store detected pressure level(s) in each cylinder.

11. The assembly of Claim 1 wherein the comparator circuit is operative to compare pressure levels in different cylinders.

12. A compression gauge assembly for diagnosing cylinder pressures of an engine cylinder(s), the assembly comprising:

a) a gauge sensor in communication with the engine cylinder(s), the gauge sensor being operative to detect compression stroke pressures within the cylinder(s);

b) a gauge controller in communication with the gauge sensor, the gauge controller including a comparator circuit operative to compare at least one detected compression stroke pressure within the cylinder(s) with a reference compression stroke pressure and to derive the cylinder pressures based thereon; and

c) a gauge display in communication with the gauge controller for displaying the derived cylinder pressures.

13. The assembly of Claim 12 wherein the gauge controller comprises a detected pressure storage circuit for storing at least five compression stroke pressures.

14. The assembly of Claim 12 wherein the comparator circuit is operative to compare a last compression stroke pressure detected in a cylinder with the reference compression stroke pressure, and for deriving the cylinder pressures therebetween.

15. The assembly of Claim 12 wherein the reference compression stroke pressure is a maximum compression stroke pressure allowed by the cylinders.

16. The gauge of Claim 12 further comprising a cylinder connector for communicating the compression stroke pressures

from cylinders recessed in the engine, the cylinder connector having a first connector end in communication with the gauge assembly and a second connector end extendable to engage the recessed cylinders.

17. The assembly of Claim 16 wherein the cylinder connector includes a substantially rigid tube.

18. The assembly of Claim 12 wherein the gauge sensor comprises a plurality of sensors each in communication with the gauge controller and a dedicated cylinder.

19. The assembly of Claim 12 wherein the gauge sensor comprises a sensor alternately connectable to a plurality of cylinders.

20. The assembly of Claim 12 wherein the gauge controller comprises a detected pressure storage circuit operative to store detected pressure level(s) in each cylinder.

21. The assembly of Claim 12 wherein the comparator circuit is operative to compare pressure levels in different cylinders.

22. A method of diagnosing an engine cylinder(s) with a compression gauge assembly, the compression gauge assembly having a gauge sensor, a gauge display and a gauge controller with a comparator circuit, the method comprising the steps of:

a) detecting compression stroke pressures within the engine cylinder(s) with the gauge sensor;

b) comparing the detected compression stroke pressures within the cylinder(s) with the comparator circuit of the gauge controller;

c) deriving pressure variances between the detected compression stroke pressures with the comparator circuit; and

d) displaying the derived pressure variances on the gauge display.

23. The method of Claim 25 wherein step c) comprises comparing first and last compression stroke pressures detected in a cylinder with the comparator circuit to derive the pressure variances therebetween.

24. A method of diagnosing cylinders in an engine with a compression gauge assembly, the compression gauge having a gauge sensor, a gauge display and a gauge controller with a comparator circuit, the method comprising the steps of:

a) detecting compression stroke pressures within the engine cylinder(s) with the gauge sensor;

b) comparing at least one detected compression stroke pressure within the cylinder(s) against a reference compression stroke pressure with the comparator circuit of the gauge controller;

c) deriving cylinder pressures based on the comparison between the detected compression stroke pressure and the reference compression stroke pressure with the comparator circuit; and

d) displaying the cylinders pressures on the gauge display.

25. The method of Claim 24 wherein step c) comprises comparing a last compression stroke pressure detected in a cylinder against the reference compression stroke pressure to derive the cylinder pressure.